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IN THE CLAIMS

1. (Currently Amended) An ~~A~~ apparatus method adapted for permitting the entry of manually generated alphanumeric and graphic data into a computer system, comprising:

a. employing a housing having opposite ends;

b. engaging a writing instrument contained within the housing; ~~and~~

presenting a writing tip at one end of the housing for writing upon a writing surface;

c. ~~a sensor system for detecting the position of the writing tip with respect to a writing surface~~ using an integral sensor system; ~~and for~~

detecting changes in position of the writing tip with respect to the writing surface; and

d. ~~a transmission system for~~ transmitting the position of the writing tip to the computer system.

2. (New) The method of claim 1, wherein detecting the position of the writing tip further comprises defining the position of the writing instrument using an orthogonal "x" and "y" coordinate system.

3. (New) The method of claim 2, further comprising:

detecting a pressure applied by the writing tip to the writing surface in a "z" direction; and

transmitting the detected pressure to the computer system.

4. (New) The method of claim 2, further comprising measuring a rotation of the writing instrument relative to the "x" and "y" coordinates.

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5. (New) The method of claim 1, further comprising transmitting at least one signal indicative of writing tip position to the computer system via an integrated antenna.
6. (New) The method of claim 1, wherein the writing instrument comprises an ink cartridge integrated with a rotating ball element, and further wherein detecting changes in a position of the writing tip comprises monitoring a deflection and a surface speed of the ball.
7. (New) A system for detecting, defining and transmitting a position of a writing tip, relative to a known location on a writing surface, to record manually generated alphanumeric and graphic data, comprising:
- a modified pen housing;
 - a dual purpose writing instrument, having the writing tip, for generating the alphanumeric and graphic data;
 - a plurality of sensors for detecting a position of the writing tip with respect to the writing surface, and for detecting changes in the position of the writing tip;
 - a transmission device for transmitting one or more signals representative of the position of the writing tip and the changes in the position of the writing tip; and
 - a computer system for receiving the transmitted signals, and for processing the signals to define the position of the writing tip.
8. (New) The system of claim 7, wherein the dual purpose writing instrument further comprises a ball point and ink cartridge for marking data on the writing surface.
9. (New) The system of claim 7, wherein the transmission device includes at least one electrical wire interconnected with the computer system.
10. (New) The system of claim 7, wherein the transmission device is wireless.

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11. (New) The system of claim 7, wherein the plurality of sensors further comprises:

a first sensor for detecting an "x" coordinate of the writing tip according to an orthogonal coordinate system; and

a second sensor for detecting a "y" coordinate of the writing tip according to the orthogonal coordinate system.

12. (New) The system of claim 11, further comprising a sensor for detecting a "z" coordinate of the writing tip according to the orthogonal coordinate system.

13. (New) The system of claim 11, wherein the first and the second sensors are deflection sensors, and further wherein each deflection sensor includes a calibrated index particular to the sensor.

14. (New) The system of claim 7, further comprising a speed sensor for measuring a speed with which a position of the writing tip changes.

15. (New) The system of claim 7, further comprising a power source integrated into the modified housing.

16. (New) A method of manufacturing a device for detecting, defining and transmitting a position of a writing tip, relative to a known location on a writing surface, to record manually generated alphanumeric and graphic data, comprising:

modifying a standard ball point pen housing to receive a writing instrument having the writing tip;

positioning the writing instrument within the housing;

interconnecting the writing instrument to a power source within the housing;

integrating a plurality of sensors with the writing instrument to detect and define a position, and a change of position, of the writing tip of the writing instrument;

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electrically connecting the plurality of sensors to a transmission device
collocated with the writing instrument.

17. (New) The method of claim 16, further comprising locating an antenna in the housing to transmit electrical signals representative of a position of the writing tip to a remote computer.

18. (New) The method of claim 16, wherein the plurality of sensors further comprises:

a first sensor for detecting an "x" coordinate of the writing tip according to an orthogonal coordinate system; and

a second sensor for detecting a "y" coordinate of the writing tip according to the orthogonal coordinate system.

19. (New) The method of claim 18, further comprising integrating a sensor for detecting a "z" coordinate of the writing tip according to the orthogonal coordinate system.

20. (New) The method of claim 16, further comprising incorporating a speed sensor into the device to measure the speed with which a position of the writing tip changes.